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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Cooper G. Urie

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EXAMINER

PHAM, THIERRY L

ART UNIT

PAPER NUMBER

2624

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/639,450	Applicant(s) URIE ET AL.	
	Examiner Thierry L Pham	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/16/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

- This action is responsive to the following communication: an Amendment filed on 7/16/04.
- Claims 1-22 are pending in application; Claims 21-22 are newly added.
- Objection to title have been withdrawn.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-9, 11-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Kageyama (U.S. 6333790).

Regarding claim 1, Kageyama discloses an image forming device (printer 200 includes a printer controller 2100, fig. 6) comprising:

- a processor (printer controller 2100 includes MPU 603, fig. 6) configured to process executable instructions;
- a storage (printer controller also includes ROM 604, RAM 60A, and other memory devices, fig. 6) configuration configured to store image data, plural instruction components, and a dynamic application (printer 200 includes printer controller 2100 and wherein printer controller 2100 further includes memory devices, i.e. RAM/ROM, for storing printer controller programs, col. 9, lines 15-30), wherein the instruction components (printer controller 2100 further includes print processing part 2140 for controlling printer's engine and other components, fig. 2, col. 6, lines 18-65) individually comprise plural executable instructions configured to cause the processor to perform an operation with respect to formation of images (forming of images via printer's engine 2200, fig. 6), and the dynamic application (printer controller 2100 further includes spool control part 2130 for performing spool control applications such as print waiting

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order, deleting print instructions, change in sequential order, col. 6, lines 28-39) comprises plural executable instructions (spool control part receives and stores print instructions, state references such as print waiting order and etc., col. 6, lines 28-40) configured to cause the processor to associate the dynamic application with at least one of the instruction components (print instruction part, col. 6, lines 40-65) and to perform an operation with respect to the at least one associated instruction component;

- an input/output interface (I/F part 602, fig. 6 & 8, col. 9, lines 1-15) configured to communicate the image data and the dynamic application externally of the image forming device; and
- an engine (printer engine, fig. 6) configured to form images upon media responsive to the image data.

NOTE: Please see “Response to Arguments” section for more details.

Regarding claim 2, Kageyama further discloses the device in accordance with claim 1 wherein the storage configuration is configured to store instruction components individually comprising plural firmware instructions (printer controller 2100 further includes print instructions component/part 2142, fig. 2, col. 6, lines 18-39).

Regarding claim 3, Kageyama further discloses the device in accordance with claim 1 wherein the input/output interface (I/F cable, fig. 6 & 7, col. 9, lines 5-15) is configured to receive the dynamic application (print job instructions from host computer, col. 6, lines 28-32) from externally of the image forming device.

Regarding claim 4, Kageyama further discloses the device in accordance with claim 1 wherein the storage configuration comprises executable instructions configured to cause the processor to identify the presence of the dynamic application (col. 6, lines 28-65).

Regarding claim 5, Kageyama further discloses the device in accordance with claim 1 wherein the dynamic application includes executable instructions configured to cause the

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processor to identify the at least one instruction component (print instructions component, col. 6, lines 40-65).

Regarding claim 6, Kageyama further discloses the device in accordance with claim 1 wherein the dynamic application includes executable instructions configured to cause the processor to store data with respect to execution of the dynamic application, and the input/output interface is configured to output the stored data (col. 6, lines 18-65).

Regarding claim 7, Kageyama further discloses the device in accordance with claim 1 wherein the dynamic application is configured to extract an instruction (receives and stores print instruction for a document job, col. 6, lines 28-40) from a data stream of the image forming device and the processor is configured to execute the extracted instruction.

Regarding claim 8, Kageyama further discloses the device in accordance with claim 1 wherein the dynamic application includes executable instructions configured to cause the processor to associate the dynamic application with an application program interface of the at least one associated instruction component (spool control part outputs the print data (instructions) to print processing component, col. 6, lines 28-65).

Regarding claim 9, Kageyama further discloses the device in accordance with claim 1 wherein the dynamic application includes executable instructions configured to cause the processor to establish a runtime linkage (printer operation information, fig. 10, col. 12, lines 25-45) of the dynamic application with an application program interface of the at least one associated instruction component.

Regarding claim 11, Kageyama further discloses the device in accordance with claim 1 wherein the dynamic application includes executable instructions configured to cause the processor to perform a test (monitors the status of the printer, col. 10, lines 17-24) of operations of the image forming device.

Regarding claims 12-19 recite limitations that are similar and in the same scope of invention as to those in claims 1-8 above; therefore, claims 12-19 are rejected for the same rejection rationale/basis as described in claims 1-8. NOTE: Claims 12-19 are the methods for performing the apparatus of claims 1-8.

Regarding claim 20, Kageyama discloses an image forming method comprising: (1) providing an image forming device (printer, fig. 6) including a processor (MPU, fig. 6) and a print engine (printer engine, fig. 6) configured to print images upon media; (2) providing plural instruction components (printer controller comprising plurality of instructions parts, fig. 2 & fig. 8) individually including plural executable instructions configured to cause the processor to perform an operation with respect to the formation of images; (3) receiving a dynamic application (instructions to spool data by spool control part, fig. 2, col. 6, lines 28-40) within the image forming device; (4) first identifying (receives and identify print instruction by spool control part, fig. 2, col. 6, lines 28-40) the dynamic application after the receiving; second identifying (instructions data are outputted to print processing part, fig. 2, col. 6, lines 28-40) at least one instruction component after the first identifying; (5) associating (fig. 2, col. 6, lines 18-65) the dynamic application with the at least one instruction component after the second identifying, the associating including establishing a runtime linkage (printer operation information including runtime linkage, fig. 10) of the dynamic application with an application program interface of the at least one instruction component, the dynamic application including plural executable instructions configured to cause the processor to perform an operation with respect to the at least one associated instruction component including storage of data corresponding to the operation; (6) outputting the stored data from the image forming device; and (7) disabling (deleting the spool operation by spool control part, col. 6, lines 28-40) the dynamic application.

Regarding claims 21-23, Kageyama further discloses the device/methods in accordance with claims 1, 12, and 20, wherein the plural executable instructions of the dynamic application

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(spooling, col. 6, lines 12-40) comprise ordered instruction of an executable computer program which are executable according to an order of the executable computer program.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kageyama as described in claim 1 above, and in view of Austin et al (U.S. 6665089).

Regarding claim 10, Kageyama does not explicitly disclose wherein the device in accordance with claim 1 wherein the dynamic application includes executable instructions configured to cause the processor to perform a Page CRC operation during execution of executable instructions within the associated instruction component comprising an imaging subsystem.

Austin, in the same field of endeavor for printing apparatus, discloses the dynamic application includes executable instructions configured to cause the processor to perform a Page CRC (Fig. 18, col. 12, lines 60-67 to col. 13, lines 1-30) operation during execution of executable instructions within the associated instruction component comprising an imaging subsystem.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Kageyama as per teachings of Austin because of a following reason: (●) to reduce operating cost (Kageyama, col. 1, lines 30-42); (●) to verify whether the updated file is complete or not (col. 13, lines 1-30).

Therefore, it would have been obvious to combine Kageyama with Austin to obtain the invention as specified in claim 10.

Response to Arguments

Applicant's arguments filed 7/16/04 have been fully considered but they are not persuasive.

- Regarding claim 1, the applicants argued the cited prior art (Kageyama) fails to suggest/teach the memory devices (storage devices) for storing dynamic applications.

In response, Kageyama explicitly teaches memory devices (storage devices) for storing the dynamic applications (i.e. RAM, ROM, and other storage devices as shown in fig. 6). According to claim 1, the applicants fail to explicitly cite the particular features of dynamic application. Referring to the originally filed specification, dynamic application is a computer software/program that resides in the printer's memory (fig. 2 of originally filed spec) that performs the following features: ●an instruction to test a desired operation of image forming devices; ●to perform any one of the following operations including capturing information, monitoring the state of image forming device, recording errors that occur during image operations, injecting itself into the data stream, gathering statistics; ●spool data to hard disk; these features of dynamic applications can be found on pages 8-10. Kageyama discloses an image forming device (printer 200) includes a printer controller unit 2100. Printer controller unit 2100 further includes plurality of memory devices/storages for storing printer controller programs (col. 9, lines 1-30). Printer controller 2100 also includes plurality of sub-components for performing many different tasks (i.e. spooling, gathering printer's stats, and etc as shown in fig. 10-11, col. 6, lines 12-65, col. 10, lines 8-65). By definition, these tasks are the same as the dynamic application tasks disclosed by the applicants. The examiner recommends the applicants to consider the cited prior art as a whole rather than individual columns cited by the examiner.

- Regarding claim 10, the applicants argued there is no motivation to combine the references (Kageyama in view of Austin) and based upon hindsight reconstruction.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge

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generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the reason to combine the references is to reduce operating cost (Kageyama, col. 1, lines 30-42); to verify whether the updated file is complete or not (col. 13, lines 1-30); this is one of the operations (CRC check) performed by Austin to diagnose the electronic portable printer in order for the printer to work properly. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

- Regarding claim 12, the applicants argued the cited prior art fails to teach the limitations as similar to claim 1. In response, please see arguments to claim 1 above for details. NOTE: Claim 12 is a method for performing the operations of the apparatus of claim 1; therefore, claim 12 is rejected for the same rationale/basis as described in claim 1 above.

- Regarding claim 20, the applicants argued the cited prior art fails to teach/suggest "receiving the dynamic application within the image forming device; identifying of the dynamic application after receiving or the second identifying of the instruction component after the first identifying". In response, Kageyama explicitly discloses all the limitations as cited in claim 20. Please see claim 20 above for more details; also see response to argument of claim 1 for more details regarding dynamic applications.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents/publications are relevant to applicant's disclosure invention.

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- U.S. 6337961 to Mori et al, disclose a print control method includes plurality of memory devices for storing dynamic instructions/applications, Fig. 2.
- U.S. 5832192 to Hino, discloses printer controlling apparatus and recording medium within the printer for storing plurality of instructions including dynamic instructions/applications, fig. 2.
- U.S. 6375297 to Hayashi, discloses printer control apparatus and a printer which includes plurality of storage devices for storing plurality of print operation instructions and dynamic instructions/applications, fig. 1.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thierry L Pham whose telephone number is (703) 305-1897. The examiner can normally be reached on M-F (9:30 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K Moore can be reached on (703)308-7452. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thierry L. Pham

A handwritten signature in black ink, appearing to read 'Gabriel Garcia', written in a cursive style.

GABRIEL GARCIA
PRIMARY EXAMINER